

Date: Thu, 26 Aug 93 23:01:53 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #1018
To: Info-Hams

Info-Hams Digest Thu, 26 Aug 93 Volume 93 : Issue 1018

Today's Topics:

 'Diversity Operation'?
 Alpha Bravo; America Brazil
 AMATEUR FTP SITES?
A strange thing that happens when you are learning code
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 Mods for Icom P2AT
 Optoelectronics Spy Equipment
 recommendations for 2m HT's please?
 Repeater Directories?
 Straight keys and J series.
 subscribe
 SWR Meters

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 17 Aug 1993 13:54:51 GMT
From: ricevm1.rice.edu!LINSCOT@rice.edu
Subject: 'Diversity Operation'?
To: info-hams@ucsd.edu

In article <1993Aug17.015547.26921@bnr.ca>
mwandel@bnr.ca (Markus Wandel) writes:

>
>This may be a FAQ, and yes, I am one who unsubscribes to these groups when
>nothing interesting passes by for a while so I may have missed it in the past.
>I am wondering about 'Diversity operation'. My shortwave receiver has an
>allusion to it in the manual; it involves tying the final IF of two receivers
>together and tuning them both to the same station. My guess is that two
>physically separated antennas are involved and the intended benefit is to
>reduce selective carrier fading. It takes a leap of faith not to imagine
>phase flutter as the two IFs get close to each other in frequency though.
>And why not just sum the two antenna outputs at the RF level and only use
>one receiver?
>
>Simplistically I once heard a catchy synthesizer pop piece on the German
>station and set one receiver (the big old one) to 6100 and my DX440 to 6075,
>on both of which the station transmits, and found that the selective carrier
>fading was not in sync and the overall music listening experience improved.
>In fact, the wafting back-and-forth effect combined with the electronic music
>was very neat indeed.
>
>Today I was listening to the same frequency on both, using wire antennas less
>than one meter apart and found that the selective carrier fading was not
>exactly the same on both machines. Is this what 'diversity' exploits?
>
>Anyone care to reminisce about practical use of this technique? Is it still
>used or has it been obsoleted by SSB?
>
>--
>Markus Wandel Ottawa Ont. Canada (613) 592-1225
>markus@pinetree.org <-- NOT 'mwandel@bnr.ca', that does not work.

In the diversity operations that I've seen, the IFs are not tied together. They go to a diversity RTTY TU, which dynamically selects whichever IF input has the best signal. The old RCA unit that I bought for 2 bucks at a hamfest claimed that it could switch between a mark and a space and not miss a beat! I never tried it out, but should have kept it - neat panel and LOTS of tubes!

73 de W5EGP - Steve -

Date: Thu, 26 Aug 1993 16:21:10 CET
From: agate!howland.reston.ans.net!xlink.net!gmd.de!dearn!esoc!wkoehler@ames.arpa
Subject: Alpha Bravo; America Brazil
To: info-hams@ucsd.edu

>If you recognise the following alphabet I'd be grateful
>if you could fill in some of the gaps for me.

>
> America Brazil Chile Denmark E.. Finland Greece Hawaii I..
> J.. Kilowatt L.. Mexico Norway Ocean Pacific Q.. Radio
> Sweden Texas U.. Venezuela Whisky Xray Y.. Zulu

England Italy Japan London Quebec Uruguay Yokohama

other options:

Amsterdam Baltimore Canada . . . Guatemala Honolulu India . Kentucky
Luxembourg . Nicaragua Ontario Portugal . Romania Santiago Tokyo . .
Washington . . Zanzibar

Wolf.

Date: Thu, 26 Aug 1993 16:47:55 GMT
From: ddsww1!chinet!drx@uunet.uu.net
Subject: AMATEUR FTP SITES?
To: info-hams@ucsd.edu

Is there any FTP sites for mods and other amateur raido stuff.
thanks
scott

--
Scott Whittle (drx) drx@chinet.chi.il.us

Date: 26 Aug 93 10:54:13
From: idacrd.ccr-p.ida.org!idacrd!n4hy@uunet.uu.net
Subject: A strange thing that happens when you are learning code
To: info-hams@ucsd.edu

You had better have a switching circuit do it indirectly for you. The
horn draws quite a bit of current.

Bob

--

Robert W. McGwier | n4hy@ccr-p.ida.org
Center for Communications Research | Interests: amateur radio, astronomy, golf
Princeton, N.J. 08520 | Asst Scoutmaster Troop 5700, Hightstown

Date: 27 Aug 93 05:40:04 GMT

From: news-mail-gateway@ucsd.edu
Subject: Daily Solar Geophysical Data Broadcast for 26 August
To: info-hams@ucsd.edu

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 238, 08/26/93
10.7 FLUX=088.3 90-AVG=102 SSN=069 BKI=1022 1222 BAI=005
BGND-XRAY=A6.2 FLU1=2.7E+06 FLU10=1.2E+04 PKI=2112 1223 PAI=006
BOU-DEV=009,004,010,011,009,012,015,016 DEV-AVG=011 NT SWF=00:000
XRAY-MAX= B2.3 @ 1039UT XRAY-MIN= A5.8 @ 0640UT XRAY-AVG= A6.9
NEUTN-MAX= +002% @ 0935UT NEUTN-MIN= -003% @ 1705UT NEUTN-AVG= -0.4%
PCA-MAX= +0.1DB @ 1900UT PCA-MIN= -0.2DB @ 2355UT PCA-AVG= -0.0DB
BOUTF-MAX=55365NT @ 1337UT BOUTF-MIN=55332NT @ 1741UT BOUTF-AVG=55355NT
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+085,+000,+000
GOES6-MAX=P:+132NT@ 1645UT GOES6-MIN=N:-062NT@ 1644UT G6-AVG=+102,+002,-040
FLUXFCST=STD:090,090,095;SESC:090,090,095 BAI/PAI-FCST=005,005,015/007,007,015
KFCST=2323 4222 2213 4222 27DAY-AP=006,006 27DAY-KP=3211 2122 2311 2222
WARNINGS=
ALERTS=
!!END-DATA!!

NOTE: The Effective Sunspot Number for 25 AUG 93 is not available.
The Full Kp Indices for 25 AUG 93 are: 2o 0+ 0+ 2- 1o 1+ 1o 1-

Date: 26 Aug 93 17:16:20 GMT
From: ncrigw2.ncr.com!ncrhub2!ncrc1m!tskelton@uunet.uu.net
Subject: Help with TS820, low output
To: info-hams@ucsd.edu

For the ham who had trouble with his TS820 w/new tubes and low output,
try replacing the driver tube also. Even though they rarely go soft,
a TS820 is pretty old and it is a good idea. I have a friend who modified
his TS820 with mil type 6146's, jacked up the plate voltage, improved the
ALC circuitry, and gets 150 watts out on 80-15 meters...about 120 out on
10 meters. 73, tom WB4IUX

--

Date: Thu, 26 Aug 1993 16:41:45 GMT
From: elroy.jpl.nasa.gov!usc!howland.reston.ans.net!spool.mu.edu!torn!nott!
bnrgate!corpgate!nrtpa038!bnr.ca!harp@ames.arpa
Subject: How does your key feel?
To: info-hams@ucsd.edu

In article <CCBzBH.8Jp@srigenprp.sr.hp.com> donrm@sr.hp.com (Don Montgomery) writes:
>From: donrm@sr.hp.com (Don Montgomery)
>Subject: Re: How does your key feel?
>Date: Wed, 25 Aug 1993 19:54:52 GMT
>Jeffrey D. Angus (jangus@skyld.tele.com) wrote:
>
>> Bencher. No doubt a smooth key, but not rugged enough. I got half way though
>
>As far as I'm concerned, there is only *one* great ambiatic paddle - that's
>the Brown Brothers design. Too bad they're out of business. I always won-
>dered why someone didn't buy up their casting equipment, etc.
>
>73
>Don Montgomery, K6LTS
>donrm@sr.hp.com

I agree the Brown Brothers is the best bar none.

I thought someone bought the patent rights to it as well as the moulds and was going to produce it. I remember seeing at least one adv.

The problems have always been with pivots and bearings. The Brown keys eliminated all that mess and was really quite a simple design.

When I see new designs with ball bearings that look like they belong on a 10HP motor with price tags of over \$150 I think there is a market that some body could fill. A mechanical device with two contacts shouldn't have to cost that much.

I have had some thoughts of home brewing one and making a magazine article out of it. I would like to do it with common low cost parts. So far everything I've come up with looks very ugly and I don't have a good source of springs yet.

I used to build keyers. I would let hams help me and earn their own keyer. I let them buy their own paddle. At that time a Brown Bros paddle was about \$35.

One young guy who had no money (High School Student) built his own paddle. I should have bought it from him and put it in a museum. It was built on a board, had a pencil stuck into a rubber eraser that acted as a spring. Had tin foil contacts on the pencil for contacts. It was terrible but it did work.

* Alan Harp K4PB * Bell-Northern Research * CW FOREVER *
* mail: harp@bnr.ca * Research Triangle Park, NC * *

Date: 26 Aug 93 20:36:32 GMT
From: ogicse!uwm.edu!math.ohio-state.edu!magnus.acs.ohio-state.edu!csn!
teal.csn.org!dfeldman@network.ucsd.edu
Subject: Is there a "network directory" anymore?
To: info-hams@ucsd.edu

I think there was a network directory published some time back. In it were
date/time/frequencies for some nets around the company (i.e., the county
hunters net met on 14.336 MHz).

Is there still such a thing? My new career as a mobile 20M op leaves me
interested in listening in on some nets.

73 Dave WB0GAZ dfeldman@teal.csn.org

Date: 27 Aug 93 03:49:14 GMT
From: ogicse!uwm.edu!spool.mu.edu!umn.edu!csus.edu!netcom.com!jfh@network.ucsd.edu
Subject: Is there a "network directory" anymore?
To: info-hams@ucsd.edu

dfeldman@teal.csn.org (Dave Feldman) wrote:
>I think there was a network directory published some time back. In it were
>date/time/frequencies for some nets around the company (i.e., the county
>hunters net met on 14.336 MHz).
>
>Is there still such a thing? My new career as a mobile 20M op leaves me
>interested in listening in on some nets.

There's a network directory on the ARRL bulletin board. I don't know if it
has been placed in an ftp site. If you can't find it and no-one reports seeing
it somewhere, let me know and I see if I can get it to you. I've already
downloaded it.

--

Jack Hamilton jfh@netcom.com kd6ttl@n0ary.#nocal.ca.us.na packet
Post Office Box 281107 San Francisco, California 94128 USA

Date: Thu, 26 Aug 1993 14:26:24 GMT
From: newsflash.concordia.ca!sifon!napoleon.EETECH.McGill.CA!luca@uunet.uu.net
Subject: Mods for Icom P2AT
To: info-hams@ucsd.edu

You'll find the mods on anonymous ftp site ham.eetech.mcgill.ca
in /pub/ham-radio/mods/icp2at.mod

73'
Luca
VE2WKR

--
Just say no to summer.
McGill University Electrical Engineering Department
Luca@Napoleon.EETech.McGill.CA | VE2WKR

Date: Thu, 26 Aug 1993 13:59:49 GMT
From: haven.umd.edu!darwin.sura.net!uvaarpa!cscsun!dtiller@ames.arpa
Subject: Optoelectronics Spy Equipment
To: info-hams@ucsd.edu

Fred McKenzie (fred-mckenzie@ksc.nasa.gov) wrote:
: In article <9308241213.AA02120@maverick.aud.alcatel.com>,
: mrkaz@maverick.AUd.alcatel.COM (Kris Mraz) wrote:
: The Optoelectronics ad on page 157 of Sept. QST contains all manner of
: > electronics seemingly unrelated to amateur radio. The best I can make
: > out from their obtuse ad copy, they're selling stuff used to eavesdrop
: > on cellular phones

: Kris-

: I saw much of this equipment demonstrated at the Orlando Hamfest, last
: March. It is actually test equipment with legitimate uses in servicing
: various types of two-way radios, including cellular phones.

: The problem is, as you have pointed out, that they are advertising their
: products to appeal to customers who might have other uses. I agree that
: QST is the wrong place to place such ads.

Who's to say that a whole bunch of "legit" users don't read QST? I don't
suppose Maersk advertized for radiotelephone operators in QST and/or QEX
just to support ham radio :-). I've noticed that lots of folk employed
in the radio industry professionally are also hams. QST is probably a very

cheap way to get to them, instead of spending billions (ok, thousands)
advertising in the trade rags. Just MH0.

--

David Tiller | Network Administrator | Voice: (804) 752-7373 |
dtiller@rmc.edu | Randolph-Macon College | Fax: (804) 752-7231 |
n2kau@wa4ong.va.usa.na | P.O. Box 5005 | "A Woman Scorned is a |
ICBM: 37 45N 77 45W | Ashland, Va 23005 | terrible thing to waste" -me|

Date: 26 Aug 93 22:59:04 GMT
From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net
Subject: recommendations for 2m HT's please?
To: info-hams@ucsd.edu

Before the advent of synthesized hand-helds, HT-220's were the premier
ham handheld rig. They could be made to work in both the 2m and 70cm
ham bands with little effort and came in a wide variety of configurations.
They are no longer made by Motorola. The current Motorola commercial stuff
can be programmed for the ham bands, but most amateurs want direct keyboard
frequency entry which can not be had with these radios.

Many amateur repeaters are built out of GE MASTR II stuff. Likewise this
was one of the premier convert from Commercial to amateur service stuff.
The Mastr is more of a marketing name than a specific radio though, and there
are things from handhelds (kind of scummy ones in my opinion) to mobiles to
bases.

-Ron

Date: 26 Aug 1993 17:16:31 GMT
From: concert!lester.appstate.edu!usenet@decwrl.dec.com
Subject: Repeater Directories?
To: info-hams@ucsd.edu

Can someone please tell me how I can obtain a repeater directory? Is there
one available electronically? If not, where can I purchase one?

Date: 26 Aug 93 11:59:12 EST
From: sdd.hp.com!elroy.jpl.nasa.gov!usc!howland.reston.ans.net!
usenet.ins.cwru.edu!magnus.acs.ohio-state.edu!bgsuvax!uoft02.utoledo.edu!tulip!
mohan@decwrl.dec.com
Subject: Straight keys and J series.
To: info-hams@ucsd.edu

Hello,

Once in a while in this newsgroup some hams refer to J - series straight keys. Can someone tell me what these are ? I have noticed that most of the the keys are refered to as good quality ones. I want to know who makes them and how much do they cost.

Thanks for any info.

--mohan

```
=====
+ Mohanakrishna Pakkurti          + mohan@jupiter.cse.utoledo.edu      +
+ HOME: 2239 University Hills Blvd #204, Toledo OH 43606. Phone:(419)536-9073 +
=====
```

Date: 27 Aug 93 01:47:36 GMT
From: news-mail-gateway@ucsd.edu
Subject: subscribe
To: info-hams@ucsd.edu

Subscribe to INFO-HAMS

/ Julie Strietelmeier -=*=- julie@cel.cummins.com -=*=- /
/ Sysop of CrossRoads BBS (812) 342-7078 =*= 1:2205/6 /

Date: 27 Aug 93 01:22:01 GMT
From: ogicse!hp-cv!hp-pcd!hpcvsnz!tomb@network.ucsd.edu
Subject: SWR Meters
To: info-hams@ucsd.edu

Gary Coffman (gary@ke4zv.uucp) wrote:

: Now suppose the line is *not* terminated in a resistor of the line's
: characteristic impedance. Let's first look at two extreme cases. If
: the line is *open*, then current will be zero and voltage will be
: maximum, a very high impedance point. Note that the voltage and
: current are now out of phase by 90 degrees. When the voltage collapses,

Poppycok. The instantaneous net voltage and current on a line at any point are the vector sum of the voltage and current of a forward and a reverse travelling wave. For each of those two, the ratio of voltage to current is the line impedance. If you do the measurement at a single frequency, and if the line impedance is real (no reactive

component, purely resistive), the current and voltage will be exactly in phase. If you could truely open-circuit an end of the line so there is zero current there, then you can't say the voltage and current are 90 degrees out of phase at that point, because the current there is at all points in time zero. If there's a 90 degree phase shift between voltage and current, it's because you have put a purely reactive load at that point, not a true open circuit. Period.

=====

: Now this would all be pretty academic if we couldn't separate
: V_f and V_r so we could measure them. Various bridge type circuits
: can be used to separate the two wave components by taking advantage
: of non-reciprocal properties of the bridge circuit. We can also
: take advantage of the properties of travelling waves in the monimatch
: to do the same thing. It's difficult to show how to build a VSWR
: meter without drawings, so I'll refer you to the instrument on
: page 27-11 of The ARRL Antenna Book for a line section that will
: work at VHF/UHF and that can be made out of ordinary copper plumbing
: fixtures.

Gary earlier in the posting noted that an SWR bridge measures VSWR or ISWR rather than SWR. I take some issue with this. I claim that almost all bridges that are physically a small fraction of a wavelength make their measurement by ratioing current and voltage at a point in the line; a true VSWR meter would measure the RMS voltage at at least two places on the line (separated, for example, by $1/4$ wavelength in the line), but this is NOT the way these meters work. Whether the voltage is measured with a transformer, a capacitive divider, or a resistive divider, it's the voltage at a single point in the line. And at that same point, the current is measured, with a current transformer, the voltage drop through a resistor, or as an inductive pickup that's also a capacitive pickup monitoring the voltage: that is, the parallel wire.

A forward wave will have $v/i=z$, where i is measured as positive if flowing toward the load; a reverse wave will have $v/i=-z$, where i is measured as positive if flowing away from the load. The SWR meter works by expecting $v-i z=0$ for i measured positive toward the load; built in to the meter is an assumption about z ! The meter does NOT know the z of the line you are measuring, so if you use a 50 ohm meter on a 75 ohm matched line, it will tell you incorrectly that the line has an SWR greater than 1:1.

If you want more math details of how the meter works, I could be talked into providing them.

Date: Thu, 26 Aug 1993 14:33:41 GMT
From: agate!howland.reston.ans.net!sol.ctr.columbia.edu!jabba.ess.harris.com!
news.ess.harris.com!su102w.ess.harris.com!harris.jhobson@ames.arpa
To: info-hams@ucsd.edu

References <746264638snx@skyld.tele.com>, <CCBzBH.8Jp@srgenprp.sr.hp.com>,
<harp.15.0@bnr.ca>s.harr
Subject : Re: How does your key feel?

In article <harp.15.0@bnr.ca> harp@bnr.ca (Alan Harp) writes:

>I used to build keyers. I would let hams help me and earn their own
>keyer. I let them buy their own paddle. At that time a Brown Bros
>paddle was about \$35.

>One young guy who had no money (High School Student) built his own
>paddle. I should have bought it from him and put it in a museum.
>It was built on a board, had a pencil stuck into a rubber eraser
>that acted as a spring. Had tin foil contacts on the pencil for
>contacts. It was terrible but it did work.

When I first became a ham in high school, I built several Heathkits
including the keyer (HD-10??). I didn't like the single paddle so I
built a "squeeze keyer" using a block of wood as the base, thin pieces
of wood as the paddles held on with rubber bands, machine screws for the
paddle side of the contacts, and another piece of metal as the common.

Of course the keyer wasn't amniosyn ... uh onomatop....uh...
idiosyncr ...uh... wouldn't go didahdidahdidah automatically. :^)

Harv

.....
: Harv Hobson : Interests: Amateur Radio, : harris.jhobson@ic1d.harris.com :
: WB4NPL : Barbershop Quarteting, : jhobson@su19f.ess.harris.com :
: 407-727-6642 : Bible Study, Parenting : :
: Palm Bay FL : : :
:.....

Date: 26 Aug 1993 17:21:10 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!darwin.sura.net!
mojo.eng.umd.edu!chuck@network.ucsd.edu

To: info-hams@ucsd.edu

References <CCBzLn.Myp@news.Hawaii.Edu>, <CCC2zo.Eqq@crdnns.crd.ge.com>,
<1993Aug26.001614.14194@en.ecn.purdue.edu>
Subject : Re: How does your key feel?

In article <1993Aug26.001614.14194@en.ecn.purdue.edu> n9ljx@en.ecn.purdue.edu
(Scott A Stambaugh) writes:

>I don't care for Benchers. Sometimes in the heat of a contest I need bang out
>something and the adrenalin gets the better of a bencher. The last contest I
>ran at someone elses QTH the only handkey was a bencher. I soon learned how
>to switch CT to keyboard send!!

Do you use your feet to send???

The only way I can get my Bencher to derail is to hit the wrong side of the
paddles, or to put up/down motion on the paddles. Neither action is going
to make your CW come out right.

I can't imagine being so worked up that I couldn't use my Bencher, but
could still use some other iambic paddle key. It takes some very carefully
timed motions to make an iambic keyer work at all.

Something just occurred to me. Were you using an iambic Bencher, or
the non-iambic Bencher? I can easily see how the non-iambic Bencher could
be very delicate.

73,

Chuck Harris - WA3UQV
chuck@eng.umd.edu

End of Info-Hams Digest V93 #1018
